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GARDEN MANAGEMENT II.

Having considered in a preceding circular the details of Garden Management I., including treatises on such phases of vegetable growing as seeds and seeding, soil preparation and fertilization, transplanting, etc., the following discussion deals with the problems confronting the gardener in caring for the vegetable garden.

It is to be hoped that every young gardener will make extra efforts to make exhibits of produce grown and to this end special directions are written for the preparation of vegetables for market and the exhibition table.

Cultivation. Proper garden cultivation is valuable in three different ways: First, by keeping moisture from being evaporated; second, by getting rid of weeds; and, third, by stirring the soil in such a way as to make the plant food available for the growing crop. A good soil mulch of a few inches will hold a large amount of moisture from escaping, so that it is a very important thing to stir the soil after each irrigation, as will be later discussed in the following pages. One of the best cultivating tools for use in the garden is a small wheel hoe or wheel cultivator which can easily be pushed by hand and which covers the ground quickly besides doing the work thoroughly and uniformly. Another useful tool is the push or shove hoe which is pushed in front of the gardener, cutting off small weeds and leaving a nice, loose mulch on the surface. Following these tools, a small hand hoe can be used to get rid of weeds and to stir the soil around the plants. For working near small seedlings when they are first pushing their way along, a hand weeder, which can be bought for 25c, is one of the handiest tools the gardener will have.

The cultivation of the garden will be made very much easier and found less laborious if the first crop of weeds are got rid of thoroughly. No weeds should be permitted to go to seed. In a small garden they should be gathered and thrown away rather than allowing them to lie between the rows. The

neatness of the garden will be an important factor in the judging by the inspector.

It is not advisable to cultivate the garden in the early hours of the morning when there is dew on the leaves. Disease might be started in one way or another by doing this and the plants might be "choked" by the soil adhering to the leaves. For practically all garden crops level cultivation should be given and frequent stirring of the soil will be conducive to the best results.

Garden Irrigation. Where it is possible for water to be applied to vegetable crops advantage should be taken of the opportunity of doing so. Garden crops require for the best development an abundance of moisture in the soil to keep them growing constantly. For early season vegetables or those which come off the garden in late spring or early summer but little artificial watering will be necessary, for the moisture in the soil at that time, if maintained there by good cultivation, will be sufficient for their needs. But where later crops, such as celery, cauliflower, cabbage, tomatoes, etc., are being grown through the summer season, watering at various intervals will be of great assistance to the plants. When, how, and in what amount to apply the water will be the main questions that confront the amateur gardener—these are so dependent upon conditions of weather, soil and crop as to make it almost impossible to state any very definite facts. However, certain rules can be abided by which will help greatly in overcoming difficulties.

If vegetables are to be irrigated they must first, last and all the time be well cultivated. Proper cultivation at the right time will go a long way in holding the moisture in the soil as well as keeping it mellow and in such a condition that the plants can feed readily and grow vigorously. If no cultivation is given the soil after watering there will usually be formed a crust which is not only detrimental to the best growth of the plants but which will later be hard to break. Immediately the soil is in proper condition to be stirred following the irrigation a light cultivation should be given.

Water should be applied only when there seems, by soil inspection, to be a lack of sufficient amount for the welfare of the plants. It must be remembered that a water-logged soil is a great hindrance to the vegetables. It is always better to give the plants a good watering at long intervals than to water shallowly and frequently. The deepest roots must

have plenty of moisture and enough water should therefore be given so that the water penetrates thus far. As before suggested, the amount of water sufficient for this will vary with the kind of soil and the crop which is being grown. It is preferable not to water in the heat of the day, and where the nights are warm applying the water towards the latter part of the afternoon or the forepart of the evening, is to be recommended. Otherwise, water thoroughly before the sun is very high in the morning. Avoid putting the water on in such a way as to cause the soil to run together and puddle as the result will be the formation of a crust that will be hard to break in after-cultivation. Under most circumstances application by sprinkling is suitable except for crops growing high, in which case the water should be carefully led along between the rows close to the plants.

Light cultivation should follow as soon as the soil is in workable condition, and the suggestions made under "Cultivation" as closely followed as possible.

Tomato Growing. Soon after the plants have been transplanted to the field, cultivation should be kept up between the rows and the plants in the row to keep down weeds and to hold the moisture by a light mulch. To have early fruiting of tomatoes the plants must be growing rapidly after being set. If training and pruning of the vines is to be practiced the plants can be set 2 feet apart in the row. This is a very useful method of growing tomatoes in a small home garden. A stake can be set at each plant and the main stem or leader permitted only to grow, all lateral branches being removed as fast as they develop. Or the plants may have a leader and two laterals and be trained to three stakes. Usually better colored, earlier and cleaner fruit will be obtained by training the vines in comparison with the method used of setting the plants 4 feet apart in the row and allowing them to trail along the ground. The tomato "leader" should be cut off after reaching a height of 5 or 6 feet.

There is often a great deal of trouble experienced in getting fruit to set early in the season through the first blossoms dropping off badly. This is due to a lack of proper pollination and can be remedied more or less successfully by jarring or shaking the plants from top to bottom when they are blooming profusely. This operation can be done when the days are bright and warm, for at this time the pollen in one blossom will be dry and be readily transferred by the wind to

other blossoms. This will greatly help the setting of the fruit at all times.

In all probability there will also be trouble experienced with a rot on the fruit which begins at the under side of the fruit and penetrates to the inside of the tomato. This is called the "blossom rot" and it is rather difficult to control. The plants should not lack moisture at the time when they are beginning to mature their fruit, and if any of the tomatoes are badly infested with the rot, the poor specimens should be picked off and burned and the plants thoroughly watered so as to make them grow vigorously.

The ideal tomato for the table is one that is only medium large, as nearly spherical as possible, the bright red or scarlet color evenly distributed over the entire surface, the fruit firm and solid and free from cracks or blemishes of any sort. For exhibition, specimens should be selected that have these points as far as possible. From 4-6 fruits, uniform in size and color and general chracteristics, should form the basis of a suitable exhibit.

Strict grading of tomatoes is necessary in order to get the best returns from this crop. No. 2s or the specimens that are cracked or blemished in any way can be saved for canning or preserving and thus can be economically used, whereas they might ordinarily find a place on the rubbish pile.

When cold weather comes and the vines are dying down the green fruits that show some color can be put away for future ripening and in this way tomatoes can be had for the table well along into the winter

Growing and Marketing Celery. Details of the transplanting of celery plants were discussed in Garden Management I. The plants should be set similarly to strawberry plants, the crown level with the surface of the soil. No trench method of setting should be employed. Soon after transplanting into the garden—rows 30″-36″ apart and plants 6″ apart in the row, light cultivation should begin. For this purpose a small Planet Jr. or Iron Age hand cultivator can be used, followed by a hand hoeing of the plants to keep them surrounded by fresh, loose soil. Weeds must be kept out, and in order to have the plants growing vigorously a good soil mulch must be maintained. Celery plants if checked during their life will often run to seed instead of producing marketable bunches.

Great care will have to be taken in watering the crop

to see that applications are made at the right time and in the proper amount. These two factors will be very largely governed by soil conditions. The plants should never lack moisture and yet they must never stand in a water-logged soil. Thorough waterings must be given preferably at long intervals rather than shallow ones at frequent intervals. A good method is to let the water slowly run down the celery row and soak into the soil. Ditches can be made close to each row and the water led down these. The soil must be wet down as far as the bottom roots extend. Just as soon as the soil is in a fit condition to be worked after irrigation, it should be lightly cultivated to hold the moisture and prevent a crust from forming. Level cultivation should be used and no dirt must be thrown up to the plants.

There are various ways in which the stalks can be blanched or made white. The most common method is to use 12″ boards 14-16 feet long, putting one each side of the celery row when the plants are about 14″ high or when the top of the foliage of the plants comes just above the boards. As the time for settting the plants will vary considerably it is best to gauge the time of using the boards when they are about the height stated. The boards on both sides of the row should be brought almost to a vertical position, the lower edge of each board just touching the base of the leaves. The boards may be held in this position by stakes driven in the ground or by short pieces of laths tacked across the top every six feet or hooks of heavy wire every three of four feet will hold them in place. A little soil can be thrown up against the bottom of the boards to prevent light from getting in thereabouts. The time taken for blanching will be from 2½-3 weeks or so. The White Plume variety should be a clean white and the Golden Self Blanching a light golden yellow when thoroughly blanched and the plants should not be taken out until they are free from the natural green coloring. All the celery should not be blanched at one time, so that it may be ready for market at different intervals. The boards can be taken down at various times for the purpose of inspecting the blanching. Right up to the time of the placing of the boards assiduous cultivation should be kept up.

Another method of blanching often practicable in a home garden is to place a 4″ drain tile around the plants when they are about 12″-14″ high.

Yet another method is to transplant the plants into a cold

frame and put them 6x6 inches apart. As the plants grow the foliage begins to get dense, light will be more or less excluded, and the plants will be very satisfactorily blanched. After the first plants have been taken out, thus admitting some light, the remaining ones can be protected by a board against the outside row or each plant can be conveniently wrapped with white paper.

The later varieties of celery are usually blanched with soil, but this method is not largely used in Oregon owing to the weather conditions in the fall and early winter. If celery is to be blanched thus it should have the soil thrown to it only when plants and general conditions are dry so that there will be a minimum danger of heart rot and other injurious diseases.

In getting the celery ready for market, the plants should be carefully dug in the field where trimming will take place. The base of the stem should be cut off in a V shape and the outer soiled leaves of each bunch removed. After being thoroughly washed the plants should be made up into bundles of one dozen bunches, tied neatly and tightly towards the bottom of the stalks.

Exhibition bunches should be as perfectly blanched as possible, of uniform size, carefully graded and tied. Fine individual bunches can also be selected for show.

MARKETING VEGETABLES AND THEIR PREPARATION FOR EXHIBITION.

The marketing of vegetable produce is a science in itself. Whereas a great deal of attention is paid to the proper cultivation of the plants, but little care is often times given to their preparation for market and exhibition. To bring a ready sale vegetables must be fresh and clean and also at the proper stage of growth for marketing.

In the selection of vegetable specimens for exhibition, there is always a tendency to show "monstrosities," that is, specimens of particularly large size, regardless of their characteristics of uniformity of shape, color, smoothness, etc., all of which features are important and catch the judge's eye. In the discussion of each vegetable in the following lines, suggestions are given concerning the marketing and exhibiting of specimens, and it is hoped that every contestant will follow these as closely as possible.

Lettuce. There is usually a tendency to cut head lettuce

before it is properly matured. It should never be harvested before it is solid and firm. Rather have it almost beginning to show signs of bursting than cut it when it is soft and flabby. The exact time can really only be learned by experience. Not all the heads will mature at the same time so that a careful watch should be kept and all the heads that are ready for market at various intervals should be cut.

In cutting, a sharp knife should be run under the plant sufficiently deep so that about one inch of stem is cut off square. Following this, the poor discolored or blemished outside leaves should be carefully taken off close up to the stem and the latter trimmed off neatly so as to leave it about ½ inch long. After the head has been thoroughly immersed in water it is ready for market.

For exhibition select heads of good size, as solid as possible, and if a number are to be shown choose those which are uniform in size and color.

Radishes. It is very important that these be harvested before they get too old and become unfit for use. At the same time they should not be pulled before attaining an edible size, approximating ½-1 inch in diameter depending upon the variety grown. Crispness and not too strong a flavor are important qualities, as well as a bright red color for the red varieties and a clean white for these sorts. Pithy radishes either grow too slow or are left in the ground too long before being pulled. Similarly to lettuce, the bed will have to be gone over when the first radishes are ready and daily care given so as to see that all roots ready for use are pulled. In bunching, from 8-12 radishes, depending on the size, should be put together and tied with raffia about one inch from the tops of the roots. Bunches should be even and the size and shape of the radishes as uniform as possible in each bunch. After immersing the radishes in water they should be packed in whatever style of a package is used with the leaves downward and the roots up. By using a hose and a strong pressure of water the roots can then be washed perfectly clean, afterwards being permitted to drain off ready for market or exhibit.

Spinach. This vegetable will require very little care in the garden, for if the seed has been sown the proper thickness no thinning will be necessary. Weeds should be kept out and the plants given good cultivation. Spinach is usually ready for use about six weeks from the time of seed sowing.

When the plants are about six inches high and have a number of leaves, they may be harvested either by cutting off the spinach just below the ground with a sharp square-bladed instrument such as a shove-hoe, or some of the leaves from each plant may be picked and the plants left to produce more leaves. They can then be easily washed by immersing in clean water, afterwards packing loosely and lightly in a box for market. If the spinach is clean no washing will be necessary. The leaves heat very quickly in a box and wilt very rapidly so that they must be gotten rid of soon after harvesting.

If successional sowings are made every 10 or 12 days up to the middle of May there will be a continual production lasting up to the middle or so of June. This vegetable runs to seed quickly in the hot summer weather so that late sowings of seed should not be made.

Peas. Cultivation of this crop should begin as soon as the plants are well up. Some loose soil should be thrown towards the rows, an excellent tool for this work being the plow attachment of a Planet Jr. or Iron Age cultivator. If the dwarf kinds are being grown there will be no support of the vines necessary, but if varieties growing 2½-3 and 4 feet are used some method of holding them must be utilized. Chicken wire makes a very handy support, or brush can be put alongside of the rows. It is customary to grow two rows of peas together if they are to be trained, having the rows 6 inches or so apart and running the means of support between the two rows.

To have this vegetable ready for the table in its best condition, the pods must be picked before they are too far advanced and beginning to get old. At the same time, they should be well filled out, yet shelling readily. There should be regular picking and the vines gone over thoroughly, every pod that is large enough being harvested so as to encourage a good bearing crop.

In saving specimen pods for exhibit, choose those which are of a good size, well filled, even in length and color, and there should be enough pods selected to cover a small plate, which is the usual form of showing them.

Squash. Having thinned the plants *in each hill to a stand of three,* there will be but little attention necessary for this crop during the summer except good clean cultivation. Winter squash should be ready to be taken from the field or

garden the latter part of September and any time following up to frost time. They should be in the storage house before there is any danger of a killing frost. The squashes will be thoroughly mature at that time if the seed is sown in May. They should be carefully handled when being taken from the field to the storage house, which can be any kind of a cellar or house where the air will be dry and fairly cool, the temperature ranging about 40-45 degrees. In separating the squashes from the vines there should be left about 1 inch of stem and there should be no bruisings or injuries of any kind to the specimens that are to be saved in storage—otherwise, it will be but a short time before rot will follow.

In selecting squashes for exhibition particular attention should be paid to the special characteristics of the variety. There should be about three specimens included in the exhibit which should, as far as possible, be uniform in size, shape and color, all true to the type represented. Medium sized specimens having the above proper characteristics are far superior to monstrous ones which are lacking the finer points.

Cucumbers. The cucumber seed should not be planted before the ground is well warmed, usually early in May. A rich soil is best for the finest cucumbers. Chicken manure can be used to great advantage, mixing up a little of this fertilizer with about twice or three times the bulk of soil and applying the mixture to each cucumber hill. Wood ashes are valuable and should be freely applied and hoed in around the hills. The plants also thrive best when they have an abundance of water and frequent and thorough waterings should be made. If the plants run to an over amount of vine at the expense of fruit, the tops can be pinched back to check them.

The cucumbers should be cut regularly from the vines. They should attain a good size, usually 6-8 inches before harvested. There should preferably be a deep green color and no trace of yellow on any specimens that are to be exhibited. There should be as much uniformity of size as possible, and care should be exercised in selection of specimens that have the best characteristics as indicated above.